

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A computer-implemented method, comprising:
downloading an application to run as a remote application on a virtual machine located on a remote site;
modifying the remote application at the remote site to generate a modified remote application;
changing a run mode of the modified remote application from a normal mode to a debugging mode;
requesting, from the remote site, the running of a debugging system on the modified remote application running on the remote site, the running of the debugging system being done at a local site;
running [[a]] the debugging system on [[a]] the local site, the local site being separated from [[a]] the remote site by at least one firewall;
storing data on the local site, the data including a local copy of [[a]] the remote application as originally downloaded to run ~~that is running on a virtual machine located~~ on the remote site; and
making it appear to the debugging system that the modified remote application is running on the local site instead of the remote site by:
establishing a communication link between a first router located on the local site and a second router located on the remote site;
using the communication link between the first and second routers to establish communication between the debugging system and the virtual machine;
receiving a timestamp indicating when the remote application was last modified at the remote site;
using the received timestamp to determine ~~whether~~ that the local copy is not up to

date with respect to the remote application; and

~~loading the local copy into the debugging system if the local copy is up to date, and otherwise~~ (i) comparing, on the remote site, the local copy as originally downloaded with the remote application to establish delta information that identifies differences between the local copy and the modified remote application, (ii) retrieving the delta information from the remote site, (iii) using the retrieved delta information to alter the local copy to match the modified remote application, and (iv) loading the altered local copy into the debugging system.

2. (Original) The method of claim 1, wherein the remote application is a component of a larger application that is running on the virtual machine.
3. (Original) The method of claim 1, wherein the virtual machine is a Java virtual machine.
4. (Original) The method of claim 1, wherein the at least one firewall comprises a first firewall protecting the local site and a second firewall protecting the remote site.
5. (Original) The method of claim 1, further comprising:
sending commands from the debugging system to the virtual machine using the communication link.
6. (Original) The method of claim 1, further comprising:
receiving run-time data and state information about the remote application from the virtual machine through the communication link.
7. (Currently Amended) A computer program product, tangibly embodied in a machine-readable storage device ~~an information carrier~~, the computer program product being operable to cause data processing apparatus to:
download an application to run as a remote application on a virtual machine located on a remote site;

modify the remote application at the remote site to generate a modified remote application;

change a run mode of the remote application from a normal mode to a debugging mode; request, from the remote site, the running of a debugging system on the modified remote application running on the remote site, the running of the debugging system being done at a local site;

run [[a]] the debugging system on [[a]] the local site, the local site being separated from [[a]] the remote site by at least one firewall;

store data on the local site, the data including a local copy of [[a]] the ~~remote~~ application as originally downloaded to run that is running on a virtual machine located on the remote site; and

make it appear to the debugging system that the modified remote application is running on the local site instead of the remote site by:

establishing a communication link between a first router located on the local site and a second router located on the remote site;

using the communication link between the first and second routers to establish communication between the debugging system and the virtual machine;

receiving a timestamp indicating when the remote application was last modified at the remote site;

using the received timestamp to determine ~~whether~~ that the local copy is not up to date with respect to the remote application; and

~~loading the local copy into the debugging system if the local copy is up to date, and otherwise~~ (i) ~~comparing, on the remote site, the local copy as originally downloaded~~ with the remote application to establish delta information that identifies differences between the local copy and the modified remote application, (ii) retrieving the delta information from the remote site, (iii) using the retrieved delta information to alter the local copy to match the modified remote application, and (iv) loading the altered local copy into the debugging system.

8. (Original) The product of claim 7, wherein the remote application is a component of a larger application that is running on the virtual machine.
9. (Original) The product of claim 7, wherein the virtual machine is a Java virtual machine.
10. (Original) The product of claim 7, wherein the at least one firewall comprises a first firewall protecting the local site and a second firewall protecting the remote site.
11. (Original) The product of claim 7, wherein the router is an SAProuter.
12. (Original) The product of claim 7, further comprising instructions to:
send commands from the debugging system to the virtual machine using the communication link.
13. (Original) The product of claim 7, further comprising instructions to:
receive run-time data and state information about the remote application from the virtual machine through the communication link.
14. (Currently Amended) A data processing system, comprising:
means for downloading an application to run as a remote application on a virtual machine located on a remote site;
means for modifying the remote application at the remote site to generate a modified remote application;
means for changing a run mode of the remote application from a normal mode to a debugging mode;
means for requesting, from the remote site, the running of a debugging system on the modified remote application running on the remote site, the running of the debugging system being done at a local site;
means for running [[a]] the debugging system on [[a]] the local site, the local site being separated from [[a]] the remote site by at least one firewall;

means for storing on the local site a local copy of ~~[[a]] the remote application as originally downloaded to run that is running on a virtual machine located~~ on the remote site; and
means for making it appear to the debugging system that the modified remote application is running on the local site instead of the remote site by:

establishing a communication link between a first router located on the local site and a second router located on the remote site;

using the communication link between the first and second routers to establish communication between the debugging system and the virtual machine;

receiving a timestamp indicating when the remote application was last modified at the remote site;

using the received timestamp to determine ~~whether that~~ the local copy is not up to date with respect to the remote application; and

~~loading the local copy into the debugging system if the local copy is up to date, and otherwise~~ (i) comparing, on the remote site, the local copy as originally downloaded with the remote application to establish delta information that identifies differences between the local copy and the modified remote application, (ii) retrieving the delta information from the remote site, (iii) using the retrieved delta information to alter the local copy to match the modified remote application, and (iv) loading the altered local copy into the debugging system.

15. (Original) The system of claim 14, wherein the remote application is a component of a larger application that is running on the virtual machine.
16. (Original) The system of claim 14, wherein the virtual machine is a Java virtual machine.
17. (Original) The system of claim 14, wherein the at least one firewall comprises a first firewall protecting the local site and a second firewall protecting the remote site.
18. (Original) The system of claim 14, wherein the router is an SAProuter.

19. (Original) The system of claim 14, further comprising:
means for sending commands from the debugging system to the virtual machine using the communication link.
20. (Original) The system of claim 14, further comprising:
means for receiving run-time data and state information about the remote application from the virtual machine through the communication link.